

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

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1. (currently amended) A moisture sensor for detecting the presence of moisture, comprising an electric circuit and ICPs (intrinsic conduction polymers), ~~electric properties of the ICPs being dependent on the amount of moisture with which they come into contact and the electric circuit wherein the moisture sensor comprises two layers of different electrochemical potential, at least one of said layers comprising said ICPs, and a dielectric separating said layers and being of a type capable of absorbing moisture and said moisture sensor being arranged for detecting a change of the electric properties of the ICPs for detecting moisture, characterized in that the ICPs form part of a capacity, the electric circuit being arranged for detecting a change of the capacity for detecting the moisture.~~ in use, said moisture as a voltage difference between the layers.

2. (currently amended) A moisture sensor according to claim 1, characterized in that on a first side of a substrate, there is provided a layer comprising the ICPs and that on a second side of the substrate opposite the first side, electrodes are provided which together with the layer form part of ~~the capacity~~ a capacitor.

3. (original) A moisture sensor according to claim 2, characterized in that the electrodes are designed as a comb capacitor.

4. (currently amended)) A moisture sensor according to claim 1, characterized in that on a first side of a substrate, there is provided a layer comprising the ICPs, while at least one first electrode is provided on a second side of the substrate opposite the first side and at least one second electrode is provided on the layer, such that the layer lies at least partly between the first and the second electrode, the first and second electrodes together with the ICPs forming part of ~~the capacity~~ a capacitor.

5. (currently amended) A moisture sensor according to claim 4, characterized in that on the first side of the substrate, there are also provided conductive paths which together with the ~~capacity~~ capacitor form an LC electrical ~~circuit of the electric circuit~~.

6-16. (withdrawn)

17. (previously amended) A diaper provided with a moisture sensor according to claim 1.

18. (previously amended) A diaper provided with a moisture sensor according to claim 2, characterized in that the first side of the substrate faces an inner side of the diaper.

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19. (new) A moisture sensor according to claim 1, wherein one of said layers is a metal.

20. (new) A moisture sensor according to claim 19, wherein said metal is aluminum.

21. (new) A moisture sensor according to claim 1, wherein said two layers both comprise ICPs.

22. (new) A moisture sensor according to claim 1, wherein said electric circuit is adapted to use said voltage difference as an energy source.

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